

IFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/672,751
Applicants : Paul VAN RIEL et al.
Filed : September 26, 2003
Title : METHOD OF ESTIMATING ELASTIC AND
COMPOSITIONAL PARAMETERS FROM SEISMIC AND
ECHO-ACOUSTIC DATA
Group Art Unit : 2857
Examiner : Anthony Gutierrez

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. §§1.56, 1.97 and 1.98, Applicants hereby submit this Information Disclosure Statement (IDS) together with a completed Form PTO/SB/08A.

This application is a continuation of parent United States Patent Application No. 09/817,807, filed March 26, 2001, now United States Patent No. 6,665,615, which was a continuation of PCT Application No. PCT/EP 00/10464, filed October 22, 1999, which designated, *inter alia*, the United States. This IDS identifies the references that were submitted and cited by either the Applicants or the Examiner during the prosecution of the parent application. Pursuant to 37 C.F.R. § 1.98(d), copies of the references are not submitted.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on January 9, 2004.

Ruth A. Walkup
(Typed Name of Person Mailing Paper)

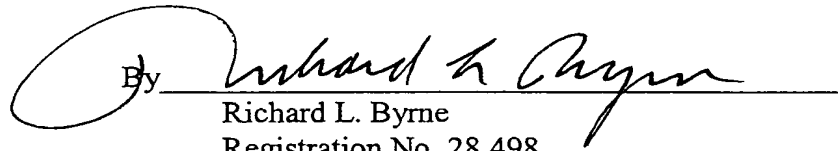
Ruth A. Walkup
Signature

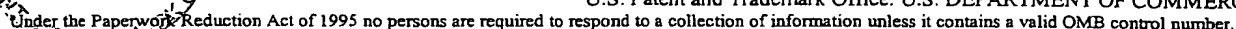
01/09/2004
Date

Pursuant to 37 C.F.R. § 1.97(b)(3), no fee is believed to be due for the submission of this Information Disclosure Statement, as it is being submitted before the mailing date of a first Office Action on the merits. Nevertheless, the Commissioner for Patents is hereby authorized to charge any additional fees which may be required to Deposit Account No. 23-0650. One (1) original and two (2) copies of this Information Disclosure Statement are enclosed.

Respectfully submitted,

WEBB ZIESENHEIM LOGSDON
ORKIN & HANSON, P.C.

By 
Richard L. Byrne
Registration No. 28,498
Attorney for Applicants
700 Koppers Building
436 Seventh Avenue
Pittsburgh, PA 15219-1818
Telephone: 412-471-8815
Facsimile: 412-471-4094
E-mail: webblaw@webblaw.com



Approved for use through 10/31/2001. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449A/PTO

(use as many sheets as necessary)

Complete if Known

Application Number	10/672,751
Filing Date	September 26, 2003
First Named Inventor	Paul VAN RIEL et al.
Group Art Unit	2857
Examiner Name	Anthony Gutierrez
Attorney Docket Number	702-031290

Sheet

1

of

2

Attorney Docket Number

702-031290

[illegible][illegible]

Examiner
Signature

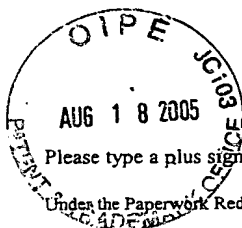
Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, D.C. 20231.

{W0098873.1}



Please type a plus sign (+) inside this box → ☒

Approved for use through 10/31/2001. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Application Number	10/672,751
				Filing Date	September 26, 2003
				First Named Inventor	Paul VAN RIEL et al.
				Group Art Unit	2857
				Examiner Name	Anthony Gutierrez
Sheet	2	of	2	Attorney Docket Number	702-031290

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, cite and/or country where published.	T ²		
	AI	SIMMONS et al., "Waveform-based AVO inversion and AVO prediction-error," <i>Geophysics</i> 61(6) (November-December 1996) pp:1575-1588			
	AJ	DRUFUCA et al., "Ambiguities in AVO inversion of reflections from a gas-sand," <i>Geophysics</i> 60(1) (January-February 1995) pp: 134-141			
	AK	BULAND et al., "AVO inversion of Troll Field data," <i>Geophysics</i> 61(6) (November-December 1996) pp: 1589-1602			
	AL	YILMAZ, "Seismic data analysis, processing, inversion, and interpretation of seismic data," <i>Investigations in Geophysics, Society of Exploration Geophysicists II</i> (1987) pp: 1807-1839, Stephen M. Doherty, Editor			
	AM	SMITH et al., "Weighted stacking for rock property estimation and detection of gas," <i>Geophysical Prospecting</i> 35 (1987) pp: 993-1014			
	AN	FATTI et al., "Detection of gas in sandstone reservoirs using AVO analysis: A 3-D seismic case history using the Geostack technique," <i>Geophysics</i> 59(9) (September 1994) pp: 1362-1376			
	AO	AKI, Keiiti and RICHARDS, Paul G., "Quantitative seismology, theory and methods," I (1979) pp: 153-154, W.H. Freeman and Company, San Francisco			
	AP	CASTAGNA et al., "Offset-dependent reflectivity-theory and practice of AVO analysis," <i>Investigations in Geophysics, Society of Exploration Geophysicists</i> , " 8 (1993) pp: 3-11			
	AQ	GOODWAY et al., "Improved AVO fluid detection and lithology discrimination using Lamé petrophysical parameters; "8Δ", "Δ", & "8Δ" fluid stack", from P and S inversions," <i>Canadian Society of Exploration Geophysicists Ann. Meeting</i> (1998) pp: 183-186			
	AR	XU et al., "A new velocity model for clay-sand mixtures," <i>Geophysical Prospecting</i> 43 (1995) pp: 91-118			
	AS	XU et al., "A physical model for shear-wave velocity prediction," <i>Geophysical Prospecting</i> 44 (1996) pp: 687-717			
	AT	DEBEYE et al., "L _p -norm deconvolution ³ ," <i>Geophysical Prospecting</i> 38 (1990) pp: 381-403			
	AU	GILL et al., "Practical optimization," <i>Systems Optimization Lab., Dept. of Operations Research, Stanford Univ.</i> (1981) pp: 144-154, Academic Press, Inc. (Harcourt Brace Jovanovich Pub.)			
	AV	GILL et al., "Constrained nonlinear programming," <i>G.L. Nemhauser et al. Eds., Handbooks in OR & MS</i> 1 (1989) pp: 171-210, Elsevier Science Pub. B.V. (North-Holland)			

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.